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NOBEYAMA MASAYUKI(54) METHOD FOR DISCRIMINATING COMPACTION OF GRANULAR MATERIAL AND  
INSTRUMENT FOR MEASURING MOISTURE RATIO/ DRY DENSITY

(57)Abstract:

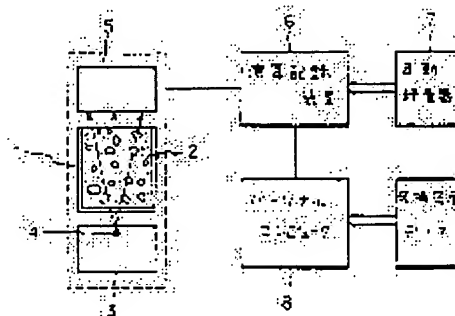
PURPOSE: To easily measure the moisture content in a granular material by putting the compacted granular material into a container, radiating a low level neutron ray thereto and measuring the intensity of the fast neutron past the granular material.

CONSTITUTION: The compacted granular material 2 (soil) is put into the container 1 and the low level neutron ray 4 is radiated from the neutron ray source and the fast neutron past the granular material 2 enters a detector 5.

Since the intensity of the fast neutron corresponds to the moisture content contained in the granular material 2;

therefore, the moisture in the container 1 and further the moisture ratio indicating the moisture per unit volume are calculated 6. On the other hand, the wet density of the

material in the container 1 measured by, for example, a weighing machine 7 is inputted and the dry density is calculated 6 from the moisture ratio and the wet density. The data is plotted on a two-dimensional display screen and a compaction curve is obtd. from the plot, by which



the optimum moisture ratio and max. dry density are obtd.

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## LEGAL STATUS

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